



BADGER STATE Smoke Signals

Serving Amateur Radio in Wisconsin



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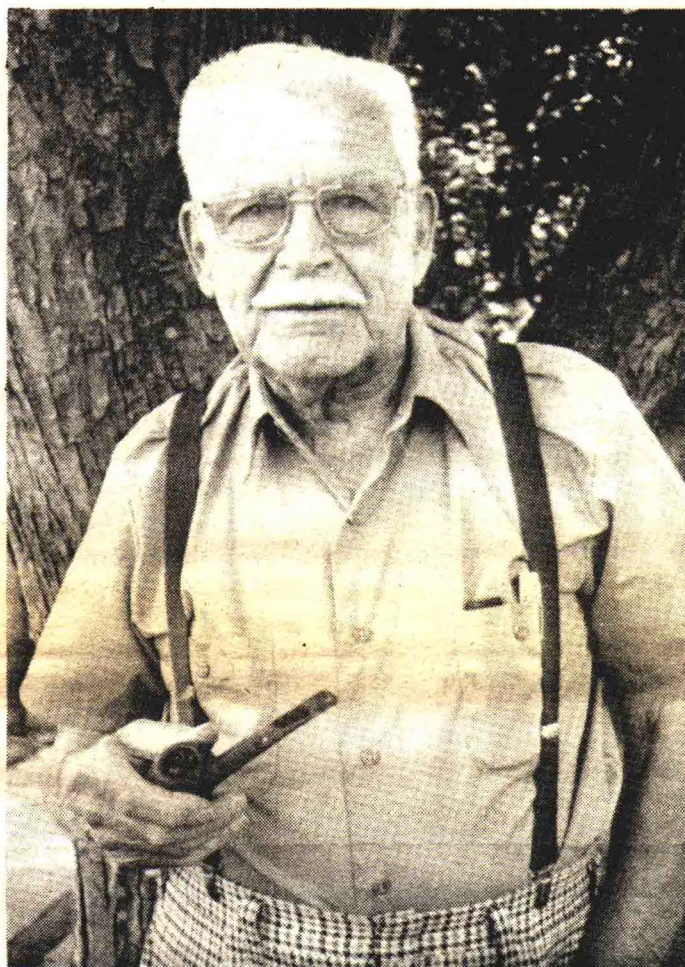
It's Never Too Late!

He remembers events that most of us know about only by reading about them in history books. He remembers the founding of the American Radio Relay League; in fact, he had been experimenting with "wireless" for three or four years before the League was founded in 1916. His interest in radio was "sparked" (pun sort of intended) by the sinking of the Titanic in 1912.

Harold A. Reif, of Baraboo, at age 87, has finally done something he had intended doing for over 3/4 of a century: he is now an Amateur Radio operator, and he recently received his call sign, KA9YQP.

Harold has had his hands on and in communications equipment just about continually for the past 75 years.

After the "unsinkable" Titanic struck the iceberg which was to send the ship to its doom in the North Atlantic, the ship's wireless operator called "CQD", which was the distress call then used. A new distress signal was also used, for the first time, by the sinking ship - "SOS." Harold says that event - the use of wireless to



Harold A. Reif, KA9YQP

call for help - is what intrigued him with that new technology. That resulted in a lifetime of both work and pleasure in radio and electronics.

He began building receivers while living in Watertown in 1912. In 1930, while living and working in Oshkosh, he married his wife, Altrude, with whom he resides in a quiet residential area on Baraboo's southwest side.

He served several stints as Communications Officer for the Civil Air Patrol, both in Oshkosh in the 1940s and 1950s, serving 10 years, and in Baraboo after joining that chapter in 1958. He later served as Group Communications Officer for the CAP. He has held a commercial license since 1947, but just recently got around to taking his Novice examination.

KA9YQP has had his first QSO; with a steady fist, he worked Sandy Hemmer, KA9VFW, Baraboo (YF of L.J., WB9TFJ.) The contact also was Sandy's first on CW.

Harold had an observation about the code and on the complaints often heard from newcomers about having to learn it: "Without the code, Ham Radio is nothing but glorified CB. If they are unwilling to put some work into it, Ham Radio can't be worth much to them."

-- K9ZZ

220 MHz Update

In our last issue (of The ARRL Letter), we reported that the ARRL had petitioned the FCC asking that it issue an order directing that Aerotron, Inc., show cause why a Cease and Desist Order should not be issued against them. Aerotron had advertised its ACSSB equipment as being available for 216-222 MHz, a violation of the Commission's marketing rules for equipment requiring type acceptance.

The FCC, in a letter to ARRL Counsel Chris Imlay, N3AKD, has declined to take such action, on the grounds that it received assurances the violation will not be repeated.

Also, we reported that the Association of Radio Reading Services (ARRS) had filed a petition requesting reconsideration of the FCC denial of their earlier petition for 500 KHz of the 220-MHz band.

The ARRL has now filed comments supporting the Commission's denial of the ARRS petition. The ARRL said: "The limited support for the proposal from radio reading services, and the complete absence of support from individual print-handicapped persons, leads inescapably to one of two conclusions: either there is no demand for the separate radio service proposed by ARRS, or there is no demand for additional radio reading services generally."

The ARRL also noted that non-commercial, educational FM stations, which utilize one of its two subcarriers for commercial purposes are already required by the FCC to accommodate radio reading services on the other subcarrier.

The ARRL comments concluded that this proposal by ARRS was "unnecessary and impractical" and said that the FCC had correctly analyzed the points made by the ARRS and found that "the ARRS proposal overall was unsupported and did not justify the relief requested."

PRESERVE 220 MHz TASK FORCE REPORT: The ARRL staff has compiled, with the help of 220-MHz frequency coordinators, a summary of the majority of the activity on the 220-MHz band. The report lists users by frequency and represents 34 states. An additional appendix of over 1100 weak signal users was included.

This report was sent to ARRL Counsel Chris Imlay, N3AKD, to aid him in writing the ARRL response to the FCC's proposal in Docket 87-14.

(Continued on page 7)

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The opinions expressed in editorials, guest editorials, columns, and letters are the opinion of the authors only, and do not, unless otherwise stated, express or imply agreement or endorsement by Badger State Smoke Signals, or any other organization.

Swapfests and other Social Events

July 10-12, 1987. ARRL National Convention in Atlanta GA. Contact: ARRL or Atlanta Radio Club, P.O. Box 77171, Atlanta, GA 30357.

Saturday, July 11, 1987. The annual Eau Claire ARC Hamfest. 4H barns on Fairfax St., behind Highland Mall. \$2.00 in advance or \$3.00 at the door. Amateur License Tests given from 9:00 a.m. to 1:00 p.m., all walk-ins. Commercial exhibitors, computers, satellites, Free tables for Hams. Contact: Gene Lieberg, 2840 Saturn Ave., Eau Claire, WI. 54703. See ad in last issue of BSSS.

Saturday, July 18, 1987. South Milwaukee Amateur Radio Club's Swapfest '87' at American Legion Post 434 in Oak Creek, WI. Buy, sell, swap, food, drinks, prizes and camping. Amateur Radio Exams. WAPR (packet radio) meeting. Tickets \$3.00. Ad with map for this Badger State Booster is elsewhere in this issue.

August 9, 1987. Hamfesters Radio Club, Inc., 53 Annual Hamfest, Willow Springs, IL. (Near Chicago) Contact: John Schipitsch, W9BNR, 13058 Finch Court, Lockport, IL 60441.

Saturday, August 15, 1987. The Green Bay Mike & Key Club's Summer Swapfest. Community Service Center at 1637 Dousman St., Green Bay, WI. Amateur Radio examinations. 8 ft. tables, \$5.00. Admission, \$1.00.

Saturday, August 15, 1987. Rhinelander Swapfest, sponsored by Northwoods Amateur Radio Club and ARES. You may set up in the parking lot using our tailgate flea market. (no tables furnished) At this swapfest you never have to bring anything home. At 1:00 p.m. you can sell what you have left at our auction. Contact: Leonard Bauman, K9RMN, 1312 Dorothy St., Rhinelander, WI 54501. (715) 369-3296

September 19-20, 1987. Peoria Superfest '87, Peoria, IL. Contact: Superfest '87, P.O. Box 3461, Peoria, IL 61614.

September 26-27, 1987. Radio Expo-87, Lake County Fairgrounds, Grays Lake, IL. Contact: CFMC, P.O. Box 1532, Evanston, IL 60204.

Sunday, October 25, 1987. Kettle Moraine Radio Amateurs Ham, Computer, and Video Fest at Waukesha, WI. Contact: KMRA, 313 Hillview Circle, Waukesha, WI 53188

November 7, 1987. AMSAT, 5th Annual General Meeting and Space Symposium, Southfield MI. Contact: AMSAT, P.O. Box 1091, Ann Arbor, MI 48109-1091

As a service to our readers, this section of Badger State Smoke Signals is available without charge to list your upcoming Swapfest, Hamfest, dinner, picnic, party or other event of interest to Radio Amateurs in Wisconsin and nearby areas.

Send information on your event to Kenneth A. Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901. In addition, space is available at attractive rates on our advertising pages, and/or we can include your flyers. For information on rates and requirements for our advertising pages, and/or for including flyers, please contact K9ZZ or K9EN.

Club Meetings

BADGER AMATEUR RADIO SOCIETY
 (W9YT - UNIVERSITY OF WISCONSIN - MADISON)
 Monthly while school in session - 2nd Wednesday - 7:30 p.m. - B-314, Electrical Engineering Building.

CENTRAL WISCONSIN RADIO AMATEURS, LTD.
 (STEVENS POINT)
 Second Wednesday.

EAU CLAIRE AMATEUR RADIO CLUB
 2nd Tuesday - 7:30 p.m. - Parks and Recreation Bldg., Oxford and 1st Streets, Eau Claire. Hams, guests welcome. Travelers welcome on wide area club repeater K9UXP, 146.31/91.

FOUR LAKES AMATEUR RADIO CLUB (MADISON WI)
 First and third Tuesdays - 7:30 p.m. - Red Cross Bldg., 4860 Sheboygan Ave.

FOX CITIES AMATEUR RADIO CLUB
 Third Monday - 7:00 p.m. - Roosevelt Jr. High School, 318 E. Brewster St., Appleton. Info: (414) 735-6294.

GREEN BAY MIKE AND KEY CLUB
 Second Thursday - Red Cross Bldg., corner Danz and Deckner, Green Bay.

GREEN FOX AMATEUR RADIO CLUB
 Third Monday - 7:30 p.m. - Green Lake Town Hall, int. of county hwy. K and N.

KETTLE MORaine RADIO AMATEURS
 Second Friday.

MANITOWOC COUNTY RADIO AMATEURS
 First Wednesday - 7:00 p.m. - City Hall, 817 Franklin St., Manitowoc
 Second Wednesday - Red Cross Building, 1816 Washington St., Manitowoc.

MENOMONEE FALLS AMATEUR RADIO CLUB
 Last Tuesday - Doors open 7:30 p.m., meeting begins 8:00 p.m. - Security Savings and Loan, Menomonee Falls. Amateurs and guests welcome.

MILWAUKEE RADIO AMATEURS CLUB
 Second Thursday - Wauwatosa Savings and Loan, 7500 W. State St.

OZAUKEE RADIO CLUB
 Second Wednesday - 7:30 p.m. - Saukville Community Center.

RIVERLAND AMATEUR RADIO CLUB
 First Tuesday - 7:30 p.m. - Onalaska Community Center, Onalaska WI.

ROCK RIVER RADIO CLUB
 First Tuesday - 8:00 p.m. - Dodge County Sheriff's Dep't, 141 N. Main, Juneau WI.

SHEBOYGAN COUNTY AMATEUR RADIO CLUB
 Second Tuesday - 7:00 p.m. - Sheboygan Red Cross/Boy Scout Bldg., 2032 Erie Ave.

SOUTH MILWAUKEE AMATEUR RADIO CLUB
 First Wednesday - Legion Post 434, Shepard Ave., Oak Creek WI. Auctions in March and October.

WEST ALLIS RADIO AMATEURS CLUB
 Second Tuesday - 8:00 p.m. - St. Francis Savings, 9330 W. Greenfield Ave.

WISCONSIN VALLEY RADIO ASSOCIATION (WAUSAU)
 First Tuesday - 7:30 p.m. - Location varies; info on 146.04/64, Wausau.

YELLOW THUNDER AMATEUR RADIO CLUB (BARABOO)
 Days rotate: Wed., July 15; Thu., Aug. 13; Mon., Sep. 14; Tue., Oct. 13; Wed., Nov. 11; Thu., Dec. 10. Monday meetings in room 20; all others room 25. Meetings start 7:30 p.m.

Let Badger State Smoke Signals know your club's meeting dates, and we will let our readers know of your meetings and activities. There may be Amateurs in your area interested in joining your club, or members of other interested in making an interclub visit.

The butterfly has wings of gold
 The firefly wings of flame,
 The bedbug has no wings at all,
 But he gets there just the same.
 -ORC Newsletter

The TEST POINT



The following are known locations where Amateur Radio license examinations are scheduled in the Badger State area.

July 11, 1987	Eau Claire, WI
July 18, 1987	South Milwaukee, WI
July 18, 1987	Minneapolis, MN
August 9, 1987	St. Cloud, MN
August 13, 1987	Milwaukee, WI
August 15, 1987	Green Bay, WI
August 22, 1987	Rhineland, WI
August 29, 1987	Annandale, MN (Robbinsdale ARC)
September 19, 1987	St. Paul, MN
September 26, 1987	Wisconsin Rapids, WI
October 17, 1987	Rhineland, WI
October 17, 1987	Minneapolis, MN
November 7, 1987	Richfield, MN (Robbinsdale ARC)
December 5, 1987	Stevens Point, WI
December 19, 1987	Rhineland, WI
December 19, 1987	St. Paul, MN

Monthly, First Sat. Racine, WI
Monthly, Third Sat. Loves Park, IL

GENERAL RULES FOR ALL EXAMINATIONS:

All examinations require filing an FCC Form 610 and advance registration at least 30 days before the exam date. (Some VECs may permit walkins. Check with sponsor to find out if they allow walkins.)

To register for these examinations, you must first secure a copy of the current FCC Form 610 and fill it out completely (AND CORRECTLY). Get your form from the FCC Field Office, the ARRL or Badger State Smoke Signals. Send a 22¢ SASE if you request one from the ARRL or BSSS. In most cases, forms can also be obtained from the sponsoring group. Remember-- you must file at least 30 days in advance unless otherwise indicated.

ARRL/VEC examinations require a check for \$4.35 payable to "ARRL/VEC".

The FCC now requires applicants to show their original Amateur license to the VEC. As in the past, a copy of your license must be attached to your FCC form 610.

Additional information is given below.

July 18, 1987 - South Milwaukee Hamfest
Contact: Badger Examiners
KB9G Mickey Dolgin
507 E Spooner
Milwaukee, WI 53217

Thursday, August 13, 1987
MILWAUKEE METRO AREA TEST TEAM - MRAC/VEC

Wauwatosa Savings and Loan Building, 7500 West State Street, lower level.

Bring your original license and 2 good photocopies, a pen, and \$4.35 for the exam fee. Walkins accommodated if time permits.

Register in advance on a Postal Service 14 cent postcard; print the grade of license you are applying for, your name, address, and telephone number. Send to:

The Milwaukee Radio Amateurs' Club, Inc.
N50 W16328 Pin Oak Court
Menomonee Falls WI 53051.

GREEN BAY, WI
Contact: Larry Siebers, KD9IA
7077 Weyers Rd.
Freedom, WI 54130
414-798-3823

RHINELANDER, WI - NICOLET COLLEGE
Science Center, Fireside Room - (DeVry VEC)
Contact: Len Bauman, K9RMN
1312 Dorothy St.
Rhineland, WI 54501
(715) 369-3296

WISCONSIN RAPIDS, WI - VOCATIONAL SCHOOL
Contact: Gene Santoski, K9UTQ
1220 18th St., So.
Wisconsin Rapids, WI 54494
(715) 423-6368

STEVENS POINT, WI - BLUE TOP INN
Contact: Joe Larson, N9JW
644 Portage St.
Stevens Point, WI 54481
(715) 344-1182

RACINE, WISCONSIN - ARRL/VEC
First Saturday of each month except during summer and the Christmas holidays.
Exams are given at the Red Cross Building, 4521 Taylor Avenue, Racine WI 53405.
Bring your original license and a photocopy of it; also bring some form of photo identification, such as a Wisconsin photo driver's license, and a check for \$4.35 payable to ARRL/VEC.
Pre-registration at least 40 days before the test is desired, but walkins are permitted and will be accommodated until the extra supply of exams is exhausted.
Send pre-registration to: William R. Firchol, Jr., N9DMP, 1912 27th Street, Kenosha WI 53140.

Third Saturday of every month.
Northern Illinois Volunteer Examiners (DeVry VEC). Held at North Suburban Library on North Second Street in Loves Park, IL.
Contact: Gene Melton, AK9N
2901 Billie Rd.
Rockford, IL 61109
(815) 874-6867

MINNESOTA TESTS
Gopher/Minneapolis ARC: Robbinsdale ARC:
Avery Finn, KØHLA Ron Schultz, NAØU
P.O. Box 53 6308 Peacedale Ave.
Hopkins, MN 55343 Edina, MN 55424
(612) 448-5384 (612) 920-7473
St. Paul ARC: St. Cloud ARC:
Jay Bellows, KØQBE P.O. Box 141
997 Portland Ave. St. Cloud, MN 56302
St. Paul, MN 55104 Leonard E. Carlson
(612) 222-7253 (612) 252-0414

LOCATIONS:

University of Minnesota Moos Hall, Washington and Union Streets, Minneapolis.

Medina Ballroom, Midwinter Madness Hamfest, Medina, Minnesota.

St. Luke's School, 1005 Summit Ave., St. Paul, Minnesota.

North Memorial Medical Center, 3300 Oakdale Ave. N., Robbinsdale, Minnesota.

Minnesota State Fairgrounds, Amateur Fair Hamfest, St. Paul, Minnesota.

St. Cloud, Minn., Annual Hamfest.

Handi-Hams Camp Courage, Annandale, Minnesota.

Richfield, Minnesota, Hamfest Minnesota and Computer Expo.

(ed note.) Thanks to Marv Mahre, WØMGI for the Minnesota information. If you are interested in any of the Minnesota tests, we suggest that you save the above information as we may not be able to have the complete list in every issue of Smoke Signals.

This section of Badger State Smoke Signals is available to publicize your Volunteer Examiner Amateur Radio license examination schedules.

Please send us your schedules of dates, times, and locations that you will be conducting examinations and we will include the information here. Be sure to include contact address and any other necessary requirements. Information should be sent to K9EN or K9ZZ at the address shown on page 2.

MISCELLANEOUS MISCELLANEOUS MISCELLANEOUS

Oh what the heck -- items of interest:

Green Fox Amateur Radio Club (Green Lake)
FOXTALES

Jack, KC9WC has qualified for the ARRL Golden Jubilee Award for working 100 countries or more during 1987.

Taylor County Area Amateur Radio Club
Taylor County ARES

Jack, KA9UAL, had an Amateur Radio display set up at Career/Hobby Day, held at Athens High School in Athens, WI. The exhibit included a working HF receiver and a 2-meter transceiver, which Jack used to monitor and make contacts on the area repeaters.

The Wisconsin Association of Repeater
NEWSLETTER

Recently elected officers are: Chairman: George Loudon, N9CCI, Vice Chairman: Richard Drew, K9PJB, Secretary: Ron Shimek, WB9MFB, and Treasurer: Dennis Drueger, N9AOZ.

At the March meeting a motion was made to express the Association's gratitude to Dick Victor, WD9GRI, for his dedicated service as Chairman for the past eight years by presenting him with a suitable plaque. The motion was seconded and passed unanimously.

Our thanks to the above mentioned clubs and their bulletins for the information presented. Badger State Smoke Signals will be pleased to exchange bulletins and information with your club. Please contact K9ZZ or K9EN.

Yellow Thunder Amateur Radio Club

**K9ODK
WB9FDZ**

The May 18th 1987 meeting of the Yellow Thunder Amateur Radio Club, Inc. was called to order by the President, Steve Schwogler, WB9RNL, at 7:47 p.m. Members in attendance were:

Steve Schwogler, WB9RNL	Wis. Dells
Harry Westlund, K9EHJ	Baraboo
Jim Decker, WB9UQT	Baraboo
Duane Grotophorst, KA9HKL	Sauk City
Harry Mayland, K9FT	Baraboo
Ken Ebnetter, K9EN	Portage
Bill Klinkner	Sauk City
Anne Klinkner	Sauk City
Jim Romelfanger, K9ZZ	Baraboo

The minutes of the last meeting were approved as published in BSSS.

Jim Decker, WB9UQT, Treasurer, stated there were no receipts and no disbursements so the financial status is the same as reported at the last meeting.

Old Business: Further discussion on next falls novice classes was brought forth. Also the possibilities of having a license examination group was brought forth. The thinking being that the club could administer the exams immediately to those who attend the novice class and complete the course.

New Business: The matter of club participation in the Field Day exercise was brought up and firm plans will be finalized at the next meeting.

Harry Westlund, K9EHJ, Secretary, read some ARRL bulletins of general interest.

The secretary was also delegated to contact non-renewed members regarding payment of dues.

Winner of the buck nite drawing was Steve Schwogler, WB9RNL, who promptly donated the money to the Field Day operating fund.

The meeting was adjourned at 9:00 p.m.

Respectfully submitted

Harry Westlund, K9EHJ, Secretary

The June 16th, 1987 meeting of the Yellow Thunder Amateur Radio Club Inc. was called to order by the President, Steve Schwogler, WB9RNL, at 8:00 p.m. The following members were present:

Steve Schwogler, WB9RNL	Baraboo
Art Kleefisch, W9WSS	Baraboo
Harry Westlund, W9EHJ	Baraboo
Ken Ebnetter, K9EN	Portage
Ken Johnson, W9DZG	Mazomanie
Duane Grotophorst, KA9HKL	Sauk City
Jim Romelfanger, K9ZZ	Baraboo

The minutes of the last meeting did not meet the publishing date of the BSSS, so were read aloud and accepted on a motion by Steve Schwogler, WB9RNL, and seconded by Ken Ebnetter, K9EN.

The Treasurer was unable to attend this meeting, so there was no financial report.



YTARC Secretary, Harry Westlund, K9EHJ, relaxing at his rig after typing up the minutes of the club meeting.

The Secretary read an ARRL bulletin regarding special events operation in celebration of the adoption of the U.S. Constitution. Since this event doesn't start until December, any decision on club participation will be held off till the August meeting.

A letter to the Secretary from the Sauk County Emergency Government Committee was submitted. As per the request of the letter, we will cooperate 100%. The Secretary will supply a complete membership roster, and list the equipment available. The club will also extend an invitation to the committee member who wrote the club to attend a future club meeting. If possible an on the spot demonstration of Ham Radio operation will be planned.

Final plans for Field Day operation took up the balance of the meeting time. From the members present, there were 5 "firm" commitments to participate and 2 "maybe"s. Setup will begin at about 8:00 a.m. Time is flexible because of work schedules.

Buck Nite drawing was won by Gary L. Pratt, WB9ECO, who was not present.

Meeting was adjourned at 8:50 p.m.

The program for the evening was an audio/visual slide presentation. Program was one of the many provided by ARRL and consisted of a history of the ARRL station W1AW, from the beginning to present day and had some very interesting scenes of assorted rigs, etc.

Respectfully submitted,

Harry Westlund, K9EHJ, Secretary

Birthdaze

Charles Scholten, W9BZU July 19

Sentence Sermon

I love to think of nature as an unlimited broadcasting system through which God speaks to us every hour, if we will only tune him in.

--George Washington Carver

From KETTLE DRUMS
Journal of the Kettle Moraine Radio Amateurs

SINGLE BOARD NUCLEAR REACTOR SUPPLIES STANDBY POWER FOR 12 YEARS

(Reactor supplies CPU power during power failure or other power during power failure or other power emergencies. The QXB-1 also glows in the dark (as you will), which makes it easy to find your computer.)

Now available on a full-length plug-in card for IBM PC or compatible computers, the QBX-1 add-on nuclear reactor card provides backup power for as long as 12 years. When this card senses a power failure, explosive bolts eject moderator and control rods from the reactor's interior within 20 microseconds, bringing the reactor to its fully rated output of 20KW in less than a millisecond. Over a 12-year active life, the reactor's power decreases by 25% to 15KW.

Integral heat fins provide convection cooling of the reactor's 500W power dissipation while the reactor remains in its standby condition. If your computer's fans can't furnish 400 cubic ft./sec. of forced air for cooling, consider buying the manufacturer's heavy water cooling jacket and stainless steel pump module, which fit conveniently under a desk or workbench. Latches on each side of the reactor module let you quickly exchange the radioactive core, should you need to replace it. An optional circular viewing port of led glass lets you check the reactor's internal mechanical assemblies.

To protect users from undue radiation each reactor includes a shielding kit comprising five self-stick lead plates and 20 radiation monitoring film badges. The lead plates mount inside your computer's enclosure and reduce the gamma rays that cause soft errors to floppy disk and RAM data. For further protection, consider buying the manufacturer's 200-ft. extension cords for keyboards and monitors.

Because the reactor can supply more than enough power for your computer, you can sell excess power to your local utility company. An add-on phasing and metering kit (PMK-1) lets you connect your reactor to the local power grid. Each PMK-1 includes standard power sales contracts and Rural Electrification Board rules and regulations.

Although not required in all localities, each reactor card package includes a standard 23-volume site-evacuation plan. The plan includes blank forms for you to fill in the name and address of your reactor site and then mail to the Nuclear Regulatory Commission. As an option the manufacturer supplies the plan on 12 MS-DOS-compatible disks in Wordstar format. User-friendly templates let you type in information so that your word processor can create a complete, printed document.

Reactor prices start at \$2.3 million (1). Delivery, 7 years ARO.

Regus Patoff
Luminescent Electronic Products, Inc.
Box U-235
Trinity Site, NM 43210
INQUIRE DIRECT.

When an electrician is fired, is he de-lighted?

SWAPFEST '87

SPONSORED BY
THE SOUTH MILWAUKEE AMATEUR RADIO CLUB INC.

"SATURDAY" JULY 18 1987 7:00 AM -

at the
American Legion Post 434 Oak Creek, Wis.

BUY - SELL - SWAP
FOOD - DRINKS - PRIZES - CAMPING

FREE BEER — **HAPPY TIME** — FREE SODA

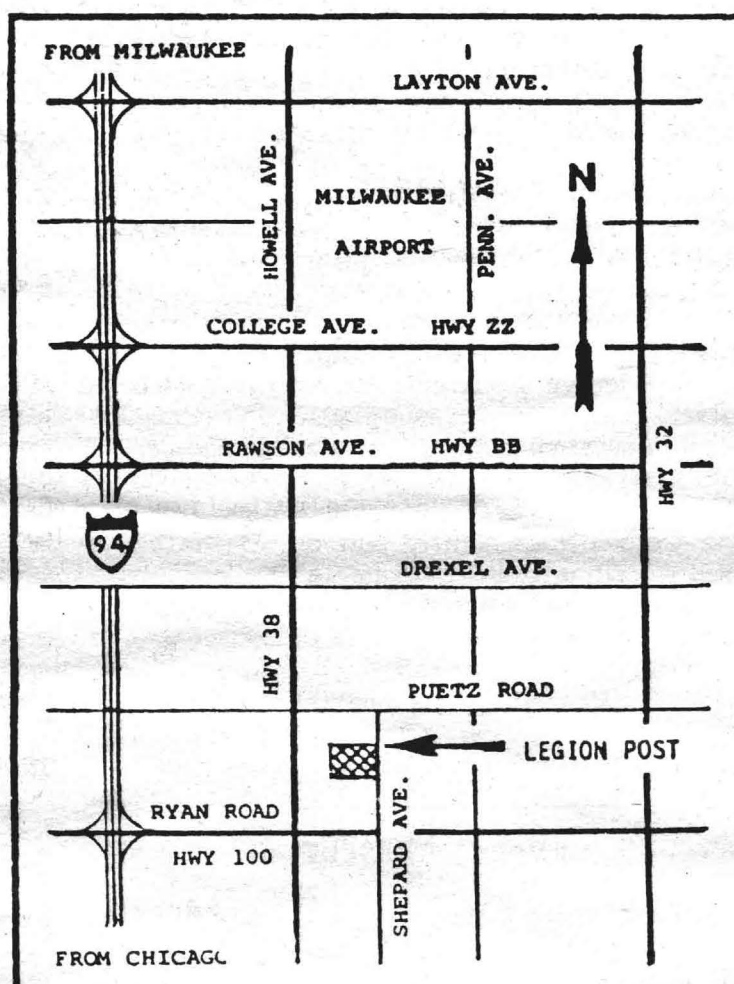
Tickets \$3.00

FIRST PRIZE \$100
SECOND PRIZE \$50

Talk-In 146.94
WA9TXE/9

LICENSE EXAMS BY
BADGER EXAMINERS

PACKET: MEETING



HERE and THERE

In this case, the "here" was Wisconsin Dells in mid-May 1987, and the "there", for me at least, was San Diego, California, in 1958. A young squirt of 16 got his Novice license and became KN6LWB. Another feller in that same San Diego suburb got his license just about then, too: Howard Trimble, K6TER. These two fellers became good friends, and have stayed in touch all these years. The last time KN6LWB (now K9ZZ) saw K6TER was in 1961.. until May, 1987. Howard and his wife Evelyn were in Wisconsin Dells for a small convention (reunion?) and K6TER and K9ZZ (and Evelyn, too) spent three hours catching up on everything we could. We hope it's not nearly as long before we see each other again!



In this photo, Howard gets a look at what BSSS looks like after it is pasted up on the layout sheet before it goes to the printer. He especially enjoys "Propagation Predictions."

"YOU FORGOT TO SAY, 'SLANT BAR M-M', AFTER YOUR CALL!"



Identify yourself
with our custom engraved call pins

- 1 line 1"x3"\$1.00
- 2 lines 1"x3"\$1.25
- 3 lines 1 1/2"x3".....\$1.75

DAVE W2CFP
TOMPKINS CO. A R C

Any color • (Add 20¢ per tag for postage.)

Logos for MARS, ARRL, CD, most Lodges, OH, IN, IL, MI, PA, SMIRK, can be engraved on badges for \$.75 extra per badge. Special logos can be made at a reasonable cost; write for quotations.

We now have the Wisconsin state outline

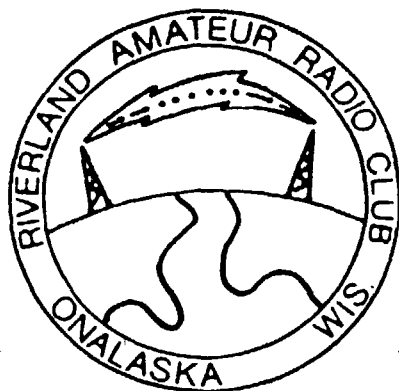
FALLERT'S ENGRAVING
27 Verlynn Ave. • Hamilton, OH 45013

ATTENTION: BSSS AUTHORS!!

If you write articles for Badger State Smoke Signals on a regular basis, such as columns, net reports, other features, or whatever, or if you would like to beat out an article for us when you feel so moved, this is to let you know that we can take computer-prepared ASCII files via modem. The parameters here at K9ZZ are 300 baud, 7 bit word, 1 stop bit, no parity. K9EN can take files at either 300 or 1200 baud. If you wish to send material to us this way, it must be done on a pre-arranged basis. My telephone is (608) 356-4249; K9EN's is (608) 742-3560. K9EN can also accept files via Packet Radio thru WA9SOU-2.

Badger State Smoke Signals would be happy to serve your club's members as your club's newsletter. The cost to your club is as low as \$4.20 per member per year. For full information and requirements, contact Kenneth A. Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901, or call Ken at (608) 742-3560.

Your subscription to Badger State Smoke Signals would be appreciated!



On June 1, 1987, at 7:30 p.m., the regular meeting of the Riverland Amateur Radio Club was called to order by Vice President Charlie Burch (KA9UUK). The minutes of the May meeting were read and approved. The Treasurer's report was also read and approved.

OLD BUSINESS

Craig, N9ETD, presented various sizes of club jackets as well as various styles, and also was wearing a T shirt with the club logo printed on it. Any one interested in ordering a jacket or a T shirt would be able to do so at the end of the meeting.

A discussion was held regarding Field Day and Craig reminded us of the need for rope, gasoline and a 40 dollar fee for a portapotty or two units for 60 dollars a day. Rick Williams, KV9U, made a motion that we order one portapotty and set a 50 dollar limit for other expenditures. The motion was seconded by Tom, WB9BJQ. The motion was carried.

Steve, KA9TSW, urged us to get Novices and Technicians involved in Field Day, as we may also have a Novice station set up.

The question of public liability insurance was brought up by Carl, W4ST. We do not have that type of insurance, but we do have permission to use the property, although that alone does not excuse us from liability. Art, W0JDC, suggested that we post a sign stating that any visitors are here at their own risk. Bill, WB9VYI, stated that you cannot sign away your responsibilities merely by placing a sign. Craig, N9ETD, informed us of the fact that we have never had insurance in the past years. Wid, W9DM, suggested we see an insurance agent, but due to the fact that this is our last meeting before the Field Day event, it would be best not to invite the public to the site.

The following people were introduced: Tom Clavin, prospective Ham; Les Peterson, W9YCV, of Greenfield WI; George Kroner, KA9HOP, new club member; Vern Sanders, K9HFZ, of Sparta WI.

Feroz, N9FJL/4S7FG, presented a final laser print copy of our constitution and suggested that Ernie, K9ZVU, and Charlie, KA9UUK, review the document. Craig moved that the document be proof read and accepted. The motion was seconded by Greg, KA9FOZ. Motion carried.

Craig, N9ETD, informed us of the Swap Fest to be held Sept. 14, 1987, at the Onalaska Community Center from 8 a.m. to 12 noon.

Rick, KV9U, reminded us of the VE exams to be held on June 18, 1987, at 7 p.m. at the Ona. Comm. Center. There will be no more applicants accepted.

NEW BUSINESS

None.

Meeting adjourned at 8:20 p.m.

PROGRAM

Greg, KA9FOZ, gave a Special Service Club report. The following items were listed as benefits to Special Service Clubs:

1. Receive lists of new licensees in Special Service Club's area of coverage as this information arrives from the Callbook.
2. Have new ARRL members in its area automatically referred to the Special Service Club.
3. Have its meeting and contact information printed in a section of the ARRL Repeater Directory.
4. Receive closer personal attention through greater involvement with League officials.
5. Receive authorization to wear or display special insignia (for club members to wear at hamfests and conventions, for example).
6. Have the authority to process and present VHF/UHF Century Club Awards.
7. Receive a subscription to the ARRL Letter.
8. Participate in training programs for club officers (seminars on programs, cooperation and effectiveness at ARRL Division Conventions jointly run by Affiliated Club Coordinators, for example).
9. Receive news and pertinent information quickly from a variety of sources.

Respectfully submitted:

Dick Low, K0JYB

MEMBERS PRESENT

Dick Low
Greg A. Miller
Bill Wood
Tom O'Brien
George Kroner
Laurence Knutson
Les Peterson (Guest)
Karl Olberg
Jack Yoshizumi
Bill Winder
Herman Ludvik
Wid Johnson
Maty Johnson
Hugh Barker
Mike Tessmer
Tim Stoffel
Vern Sanders (Guest)
Dan McKenza
Rick Williams
Tom Clanin
Ken Weigel
Ron Reed
Craig Goldbeck
Steve Pavela
Charlie Ferris
Feroz Ghouse
Art Osborn

K0JYB
KA9FOZ
WB9VYI
WB9BJQ
KA9HOP
W9SFL
W9YCV
W4ST
W9KTD
K9EGQ
W9HJV
W9DM
XYL/W9DM
KA0EJZ
N0BSH
NS9E
K9HFZ
AI9D
KV9U
No call
N9CDT
KD9OY
N9ETD
KA9TSW
W9TCW
N9FJL/4S7FG
W0JDC

PROPAGATION PREDICTIONS



If you're an optimist, then fire up your rig and get on the air! I believe Cycle 22 has finally arrived!

The 2800 MHz Solar Flux and Ap Index looked like a dead EKG for so long until it came alive on April 5th. The Solar Flux rose above 100 on April 9th and peaked at 105 on April 16th before falling off to 76 on April 22nd. On April 29th, the Solar Flux was 73 - about normal the past several years - then it climbed to 83 on May 3rd. What does all this mean? Well, the 2800 MHz Solar Flux hasn't been this active and predictive since this time 1984. April 1987 had the highest Solar Flux (85) since July 1984 (89) when Cycle 21 was falling into depression. Coincidence or not, the average Ap index for April 1987 (7) was the lowest since January 1981 (7). To add more fuel to this enthusiasm, the official sunspot number count for April 1987 was 39.3 (compare this number to March 14.8; February 4.0; January 9.8; December 6.4; November 14.7; October 35.7; and September 3.9).

As a followup to the information in the May column as to where to write, users can have direct access to SELDADS (Space Environment Laboratory Data Acquisition and Display System). Using standard computer terminals, customers may access the SELDADS and obtain printouts of solar cycle and geomagnetic variations data. Full descriptions of these and other products and services are available. For more information write to: Space Environment Services Center, NOAA R/E/SE2, 325 Broadway, Boulder CO 80303-3328 or phone (303) 497-5127.

Propagation predictions:

Bad days: July 6, 10, 20, 24, August 3, 7.

Good days: July 3, 13, 17, 27, 31, August 10.

As a footnote, when in the Northern Virginia/Washington, D.C. area, give me a ring at work (202) 647-3700 or home (703) 378-0357.

73, Woody



The Sheboygan and Manitowoc County Ham Radio Clubs hold a joint breakfast the first Saturday of every month at 8:00 a.m. in Cleveland (WI) at Stoeckigt's Restaurant, with YLs or YFs. The Sheboygan club has their breakfast on other Saturdays at either Oostburg, Waldo, or Sheboygan Falls - check 147.06 for details. Thanks W9ODV.

NEED KL7? John Offerdahl, KC9XH, Verona, will be in Alaska until mid-July; listen for KC9XH/KL7 on 14.290 daily at 9:00 p.m. CDT.

EDITORIAL

BY *Jim Romelfanger* K9ZZ

The Milwaukee Volunteer Core Group's last Amateur Radio exam session is scheduled for June 27. After that, the group will no longer exist.

The leader of the Core Group, Syl Janczak, WD9JKZ, is moving to Manitowoc, and he could not find anyone to take over leadership of the group.

Since it began, the MVCG established an enviable record as an active volunteer examination team. It offered exams frequently in the Milwaukee area, and it gave exams at a number of swapfests. Its members were willing to travel just about anywhere in Wisconsin to administer exams to the handicapped. It made exams available in large size type and Braille. The MVCG certainly did more than its part to make exams as available as possible to as many applicants as possible. The MVCG deserves our sincere thanks for a job more than well done.

A new examining group, the Badger Examiners, has been formed. It is Milwaukee-based, and we understand it is comprised of some members of the MVCG. The new group is affiliated with W5YI-VEC.

As seen elsewhere in this issue, the ARRL Foundation is administering a new scholarship, this one funded by our Central Division Director, Ed Metzger, W9PRN. Over many years, as Vice-Director, as Director, and individually, Ed has given of himself to further the general welfare of Amateur Radio, with an eye to the future. The scholarship is another example of Ed's caring attitude. Ed Metzger, we salute you — and we thank you!

EAA Amateur Operation Planned

Wittman Field at Oshkosh will be buzzing with aircraft and activity from Friday, July 31 to Friday, August 7, as this year's EAA event takes place.

Amateur Radio will be a part again this year.

W9KKK will operate from Wittman Field, as it has in past years. The W9KKK shack will be located further north of the control tower than usual; look for the ARRL flag. You are welcome to stop in for a gab session, recharge your batteries, and meet the Oshkosh Amateur Radio Club EAA crew.

The W9KKK shack is fairly well set for staff the first two days, but Hams are needed to greet visitors for the period.

W9KKK will normally monitor the SOLAR repeater on 147.945.

No picnic is scheduled this year.

The Fox Cities Amateur Radio Club will operate a Special Event Station from

the EAA grounds. Look for W9ZL 25 KHz up from the bottom of the General Class portions of the 20 and 40 meter phone bands, also possibly on two meters. W9ZL will be operated on Saturday, August 1, and Sunday, August 2 only. A certificate will be awarded to those who contact the station.

Thanks to Forest Schaefer, WD9IWL, for his help in getting the above information to us!

Great Circus Train

The Great Circus Train, loaded with colorful circus wagons, will huff and puff from Baraboo to Milwaukee for the Great Circus Parade again this year. It will steam out of Baraboo on July 7, head to Janesville for an overnight stop, then go to Milwaukee via Chicago on June 8.

Ham Radio will be aboard again this year; look for them on 146.88/Baraboo on the Baraboo to Janesville leg of the journey. Please do not call them if they are passing traffic; that's why they are aboard.

If possible, we'll try to get a few photos of the operation from the operators aboard; if we do, you'll see 'em in these hallowed pages soon!

ANSWERS TO JUNE TRIVIA QUIZ

1. J3E
2. Length (in.) = $5905 \times K/F$ (MHz) (for 1/2 wave)
3. Newington, CT
4. .66
5. $X_L = 2 \pi FL$
6. Radio Amateur Civil Emergency Service
7. Bill Halligan (founder)
8. Ground
9. 170 Hz
10. Dual-tone multifrequency

220 MHz UPDATE

(Continued from page 1)

The ARRL filed its comments with the FCC on May 21 in Docket 87-14. The text ran to 49 pages, and there were statistical exhibits totaling another 31 pages. A copy of these comments have been sent to ARRL officials. Copies are available upon request -- please send a 10 x 12 inch envelope with \$1.41 to cover postage.

Over 2000 clubs and individuals have filed comments with the FCC. As of May 27, the comments had filled 16 volumes and the FCC Docket Room was three weeks behind in filing the comments!

The Canadian Radio Relay League (CRRL) has submitted comments to the FCC supporting the ARRL's position. CRRL commented that, if the reallocation takes place, Canadian amateur activity on 220 - 222 MHz would greatly interfere with the proposed U.S. Land Mobile Service. This would have an adverse impact on the development of this band in Canada, particularly for packet radio.

(From The ARRL Letter, published by the American Radio Relay League)

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Ed Metzger Scholarship Announced

The ARRL Foundation is now administering the new "Edmond A. Metzger Scholarship," created by and funded through the generosity of Ed Metzger, W9PRN, ARRL Central Division Director. Mr. Metzger has asked that the inaugural awarding of this scholarship be made for the 1987 - 1988 academic year.

To be eligible, a student must be attending the University of Illinois, Indiana University, or the University of Wisconsin, must be pursuing a course of study in Electrical Engineering, and must be a member of the American Radio Relay League.

The deadline for submitting applications, transcripts and supporting materials for the scholarship for the 1987 - 1988 academic year only is July 15, 1987. The deadline in subsequent years will be May 1.

The ARRL Foundation Scholarship Committee will make its determination shortly after the deadline, and all applicants will be notified of the outcome toward the end of August. Application forms may be requested by writing ARRL Foundation Scholarships, 225 Main Street, Newington CT 06111, or call (203) 666-1541.



Edmond A. Metzger
W9PRN

By Bob King, KA9GNY
411 Lynn Avenue
Baraboo WI 53913

On Sunday and Monday, May 24 and 25, the "MW" Chapter of the Morse Telegraph Club operated Special Event Station AD9E from the Mid-Continent Railway Museum at North Freedom, Wisconsin, to commemorate the 143rd anniversary of Samuel F.B. Morse's first message by telegraph, on May 24, 1844.

To refresh your memory, and maybe even to tell some of our young Novices about their roots in "ham" radio, a bit of history may be in order.

Morse and Vail had been experimenting with electromagnetic energy for some years. Morse finally hit upon the idea that language could be transmitted, from one place to another, by opening and closing a flow of current through a copper wire coil wound on a soft iron core, which did not become permanently magnetized. This, of course, is what we modern day people would call a "solenoid."

In 1844, they had progressed to where they were making holes on a strip of paper, pulled past the opening and closing points, by a clockworks and making dots and dashes.

Vail worked out the original code (which was not the same as our present day American and International codes) for the letters of the alphabet, and they were in business.

On May 24, 1844, they set up their equipment in the Library of Congress, Washington, D.C., and the B and O Railroad station in Baltimore, MD. The original message "What hath God wrought?" was transmitted successfully, and the age of long distance communication was born.

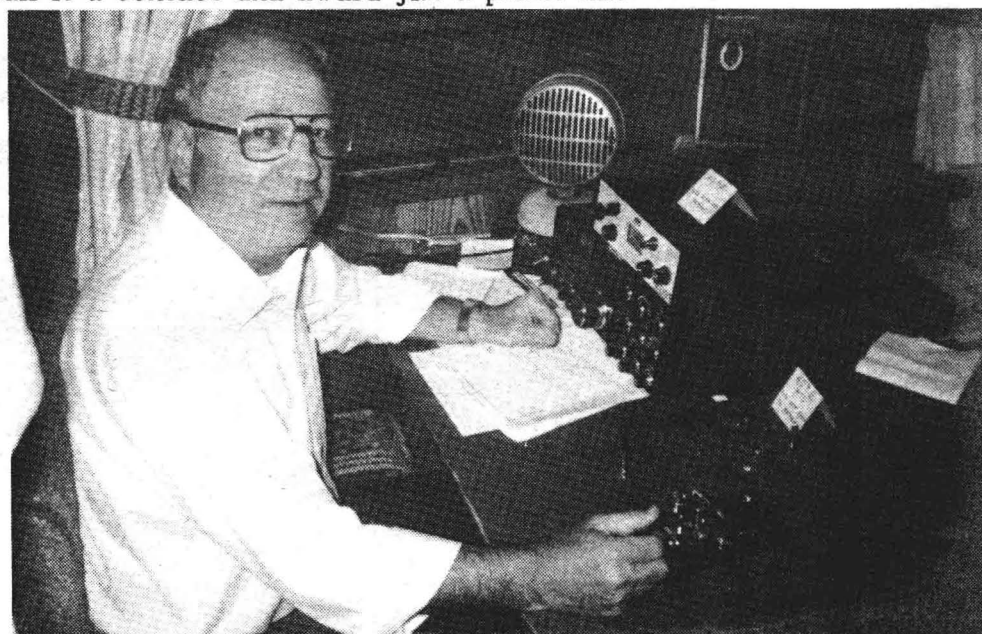
The Morse Telegraph Club, with about 3000 members throughout the United States and Canada, is dedicated to the memory of Morse and this historic event. Each year, the member chapters are hooked together by land line telegraph, made possible through Western Union and the telephone companies. This is on the last Saturday of April closest to Morse's birthday on April 25. This club is open to anyone who ever operated a "key" on land line or radio, commercial or "Ham." If interested, contact me. Dues are \$7.00 per year, which includes quarterly issues of the club newspaper "Dots and Dashes."

As far as we know, this special event station is the first that has ever been put on the air specifically to honor Morse's achievement, and we hope it will be an annual affair. We operated both days from 1500Z to 2300Z on 80, 40, and 20 meters, 44 KHz from the low end of the bands. About 100 contacts were made, despite poor propagation and the Memorial Day weekend, with so many people not at home.

The station was operated under the call of W.K. "Bill" Dunbar, AD9E, President of MTC and Editor of Dots and Dashes. MTC members AD9E, NØDJD, KA9GNY, and W9KKM operated with the gracious help of "Wil", W9JEK, and Dave, NO9M, of the Four Lakes ARC, Madison. Thanks, guys.

The QSL prize for working us will be a postcard size picture of S.F.B. Morse sending the first message. Cards will probably be mailed out sometime in July. Equipment used was a Yaesu FT-102 operating into a 67 foot end-fed Zepp.

By the way, Ye Olde "Smoke Signals" Editor K9ZZ pulled a fast one on us and sent us a CW message with the pad on his 2 meter HT. We decided to call it a contact and award Jim a prize. HI!!



Bill Dunbar, AD9E, President, Morse Telegraph Club

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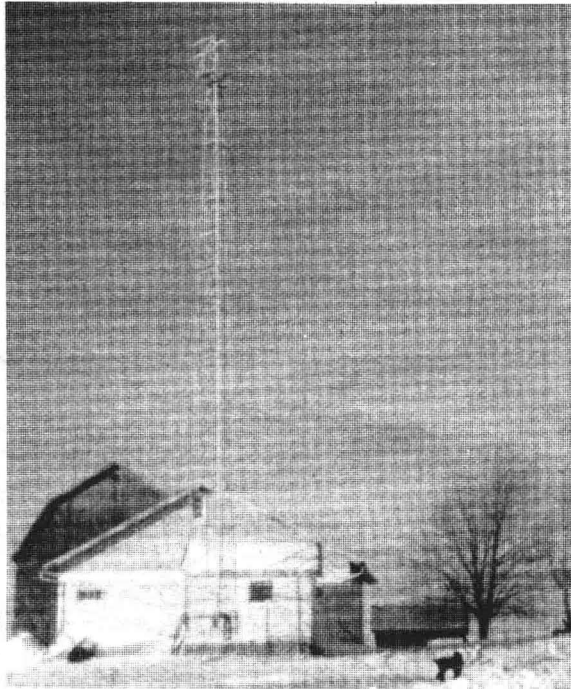
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The Polski Tower



When Ed Malinowski, KA9MVG, needed a tower, he didn't buy.. he built! He calls it a "Polski Tower" (Kielbasa type). It's self-supporting, and is 60 feet high, with a crow's nest at the top. No nuts or bolts are used; it is all welded. A ladder is part of the tower. The tower is shown at left. In the photo at the right, the tower legs are being beefed up with angle iron for added support during erection. The angles were removed after the tower was up. If you'd like more information on the "Polski Tower", write Ed at Route 1, Century Road, Loyal WI 54446. Our thanks to Ed for the photos and info! -- K9ZZ



EXECUTIVE COMMITTEE MEETS

A review of recent FCC rulemakings, a report on the IARU Region 1 conference, a report on the proposed ARRL visitors' center -- all these and other matters were heard and discussed by members of the ARRL Executive Committee at their meeting on May 16 in Birmingham, Alabama.

FCC MATTERS: The Committee spent a large portion of its time on FCC matters, most of it regarding General Docket 87-14 which would reallocate 220 - 222 MHz to the Land Mobile Service. The Committee reviewed present and future actions taken and planned by ARRL in order to mount the strongest possible defense of amateurs' continuing use of the entire 220 - 225 MHz band. The Committee noted that at least two thousand amateurs and clubs, several local government entities, a Congressman and the Canadian Radio Relay League had filed comments supporting the ARRL position.

ARRL Counsel Chris Imlay, N3AKD, reported to the Committee that only one of the three documents that ARRL had requested from the FCC under the Freedom of Information Act (FOIA) in connection with 87-14 had been released. The remaining documents were denied by the Commission, citing Rule 5 which protects internal opinion documents. Without objection, the Committee ordered ARRL Counsel to appeal this decision; the Request for Review was accordingly filed on May 29.

PRB-3: The Committee discussed the report of a special committee on PRB-3 (call signs) and directed the Executive Vice-President to explore the various alternatives to a Special Call Sign Coordinator (SCSC) and to investigate the various tax, corporate and liability implications of ARRL involvement in this program.

Executive Vice President Dave Sumner, K1ZZ, reviewed the progress toward finalization of a draft Request for Special Temporary Authority (STA) for about 40 stations to participate in a controlled study of HF packet networks. Under the STA, these stations would be permitted to operate HF packet nodes under automatic control (automatic packet operation is allowed above 50 MHz but not on the HF or MF bands). The study will be limited to six months.

Other FCC related matters included RM-5836, a petition for rulemaking filed by Regency Electronics. This petition would require that manufacturers of scanners warn customers about the implications of the Electronic Communications Privacy Act of 1986. The Committee felt the petition was not of concern to amateurs at this time. General Docket 87-107 is an FCC Notice of Proposed Rulemaking regarding "A/B" switches to be required with the connection between a consumer's television and the cable system. The "A/B" switch would allow consumers the choice of switching from the cable system to an antenna to watch local stations directly, or vice versa. The Committee agreed that the ARRL would file brief comments urging a requirement that the "antenna" position of such switches be grounded when not in use so as to minimize interference to amateurs.

Some regions of the Forest Service have proposed new fee schedules for the various radio and television services, including Amateur Radio, who presently rent US Forest Service land sites for repeater and other uses. The Committee directed ARRL Counsel to file strong comments protecting amateur interests in this matter.

Thomas Atkins, VE3CDM, has been appointed Chairman of the Ad Hoc Committee on Amateur Radio and the Media. This committee shall draft a suggested set of ethical guidelines for use during contact

between amateurs and the media. The other members of the committee are: Roy Neal, K6DUE, Richard Moseson, N2BFG, and Edward Tobias, KR3E.

Finally, the Executive Committee heard a progress report on the Visitors' Center. Dr. Owen Garriott, W5LFL, a former astronaut who was the "first amateur in space" has agreed to serve as chairman of the Concept Development Committee.

(From The ARRL Letter, published by the American Radio Relay League)

FIELD DAY VIDEO TAPE REQUEST

Amateur Radio Clubs planning to have interesting Field Day operations are invited to submit videotape of their operations for possible inclusion in the ARRL presentation *The New World of Amateur Radio*. The producers are looking for groups who have access to professional videotape gear to record their Field Day operations and then to submit the tape for possible inclusion in the new League video.

The tape format must be shot using a broadcast type three tube color camera and be recorded on professional 3/4 inch U-Matic or 1/2 inch Betacam tape. (Please don't confuse Betacam with the home-type Betamax or VHS type tapes. These are not acceptable. Neither are 8 mm or Super 8 mm home movies.)

If you are able to get some professionally mastered video of your Field Day event, send the original master tape to: *The New World of Amateur Radio*, 28197 Robin Avenue, Saugus CA 91350. After evaluation, all tapes will be sent to the ARRL for future use and library purposes.

(From The ARRL Letter)

WANT TO SOUND OFF about something in Ham Radio? Send your comments to BSSS! The address is on page 2.

Eau Claire A.R.C.

NEXT MEETING

The next meeting of the Eau Claire Amateur Radio Club will be Tuesday, July 14, at the Eau Claire Parks and Rec. building at 7:30 p.m. Lunch Committee - Joe N9GJU, Phil KA9LJK, and Robin NI9R.

JUNE MEETING SUMMARY

The meeting was called to order at 7:30 p.m. The minutes were approved as read. There was no treasurer's report, the treasurer being absent.

OLD BUSINESS

John KA9RZL reported on the Altoona Centennial station. The Club will operate a station out of the caboose of a stationary train in Altoona on Saturday and Sunday, June 20 and 21. Hours will be 9 to 5 with some additional hours possible. Operators will use their own calls, but special event QSL cards - using graphics from the Altoona Centennial flyers - will be sent to all stations contacted.

LJK reported on Field Day preparations which are going nicely. Mt. Simon Park will be the site, assuming permission for overnight use is granted. Strategies for setting up the competitive station were discussed, as were relevant rules.

Andy KA9HWN brought up the possible purchase of a trailer for use as a mobile communications center - as discussed at the May meeting. He and LJK have done some shopping and a suitable trailer (16' - 17') could probably be found for \$500 - \$600. Such a trailer could be pulled by a pick-up or possibly a heavy car. Ron KB9BM cautioned that brake requirements might limit its use to only certain vehicles, however. Motorized vehicles were not considered at this time due to possible liability and licensing complications. Possible sources of funding were discussed with some concern expressed over the propriety of soliciting help from groups whose interests would be served by the vehicle - especially in the case of commercial broadcasters. Many questions concerning issues of liability, licensing, funding, etc. were raised. A motion to authorize the use of club funds for the purchase of a trailer was withdrawn after discussion suggested that there was a consensus to move slowly and thoughtfully on such a long term commitment. President Spratt will head a committee which will investigate some of the questions raised in tonight's discussion. Other committee members are Ron KB9BM, Andy KA9HWN, Lane KD9OB, and Carl W9NW.

Randy KAØROS reported on his inquiries into Lake Altoona as a possible site for

the club picnic; John KA9VUE meanwhile made inquiries at the front desk of the Parks and Rec. building about Riverview Park as a possible site. Steve KA9OMC, representing the Menomonee club, said they would share the fun and the expenses. Finally, it was moved and seconded that the Club reserve a pavillion at Riverview Park for the 15th (first choice) or the 22nd (second choice) of August with the pavillion by the boat landing preferred. The motion passed and VUE will make the reservation.

KA9VUE reported on communications provided for the United Cerebral Palsy Walk. Participants included Fred KC9NN, Joe N9GJU, John KA9RZL, and Phil KA9LJK. All went smoothly and UCP was very pleased and grateful.

Don K9UXP reported on the status of the 31/91 repeater. No action has been taken on changing crystals as discussed at the last meeting. The problem seems somewhat less severe and a wait and see (if it works, don't fix it) attitude seems sensible at this time.

A member's question concerning Skywarn and its administration sparked a lengthy discussion of the net. Steve KA9OMC suggested Bill NB9H, District Emergency Coordinator, as a good person to address questions to regarding emergency communications in the absence of an Eau Claire County EC. Fred KC9NN emphasized the importance of net discipline if the NCS is to do his job properly. Listen awhile before keying the mike. Follow the instructions of net control. If the NCS is asking only for information concerning severe weather, don't waste time reassuring him that all is well where you are. Good habits of net discipline acquired in all net activities will pay off in emergency situations. Fred suggested that those with questions on Skywarn procedures consult the "Blue Book" and LJK circulated a sign up sheet for those needing a copy of this book.

LJK reported briefly on the Hamfest in the absence of the Hamfest Committee Chairman. As the day draws near the best source of information will probably be 2 Meters. Jim KB9BC announced that he will

have a table with materials from Handi-Hams to pass out. UXP says the NUTS & VOLTS magazine ad was FB.

LJK outlined some material received from ARRL concerning Amateur Radio's part in the bicentennial celebration for the Constitution. Special time slots have been allocated to each state for commemorative stations and special call signs will be issued. May 14 - 20, 1988 has been designated as Wisconsin's time slot.

The Meeting was adjourned at 8:38 p.m.

Respectfully submitted,

Robin NI9R -- Sec. EARC

CONGRATS!!

The Amateur Radio News Service, an international organization of editors and publishers of Amateur Radio newsletters, bulletins, and newspapers, holds an annual contest for such papers. We congratulate the following Wisconsin winning papers, all of which were judged "superior":

Kettle Drums, paper of the Kettle Moraine Radio Amateurs (KMRA), Waukesha area, edited by Bruce Herrick, K1TMM.

The Feedline, paper of the Four Lakes Amateur Radio Club (FLARC), Madison, edited by Dick Burton, N9BAF.

Watts Snoo, paper of the Central Wisconsin Radio Amateurs (CWRA), Stevens Point, edited by Frank Guth, W9BCC.

Congrats to these hard-working editors, and to their clubs, for supporting these papers.

Badger State Smoke Signals was also judged "superior."

-- K9ZZ

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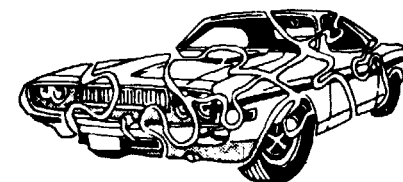
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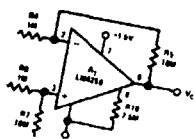
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DEALING WITH FIELD DECAY TRANSIENTS

PART 1:

WHAT IS A FIELD DECAY TRANSIENT?

What, you might ask, is a field decay transient? Why, you might further ask, do I need to know about field decay transients? Although millions of people go about their daily lives without ever thinking about these potentially damaging voltages (no pun intended), those of us who homebrew electronic equipment should know about the causes, effects, and suppression of these transients.

Almost thirty years ago, I made an electromagnet by winding insulated wire around a large nail and connecting the ends of the wire to a flashlight battery. After checking the strength of my electromagnet with common household items like paperclips and hairpins, I disconnected the battery from the coil and got the first electric shock in my life. At that time, I didn't know Faraday's law and I had certainly never heard of Lenz's law; all I knew was that I didn't get a shock from a 1.5 volt flashlight battery, but I did get a shock if I held onto the wires leading to the coil when the battery was disconnected. Although I didn't know it at the time, the shock I felt was a field decay transient.

Almost twenty years ago, while in Tech school, I again encountered field decay transients. This time, the experience was much more educational and considerably less painful. It's worth pointing out that you don't really need to know Faraday's law, Lenz's law, or differential calculus to understand these transients. You also don't need complex or expensive equipment to prove that these transients exist.

The relationships between current flow in conductors and magnetic fields around conductors should be familiar to most ham operators. These relationships form the basis for many circuits all the way from the electric power plant, through the substations, into your shack, and right up to your antenna. What does all this have to do with field decay transients? Every time a magnetic field collapses (or decays) around a conductor, a voltage is induced. In many instances this is intentional. For example, in transformers the alternating current flow in the primary winding sets

up a magnetic field which changes in intensity and polarity. As the magnetic field expands and collapses around the secondary winding, it induces a voltage in that winding. In many other instances, voltages induced by collapsing (decaying) magnetic fields can damage switch or relay contacts and sometimes destroy solid state components.

The simple circuit shown in figure 1 can demonstrate how a small but rapid change in current through a conductor can create a large transient. Instead of boring you with the laws of physics, or confusing some readers with calculus, I'll just present 2 equations and explain how they relate to figure 1.

$$-e = N \frac{d\phi}{dt} \quad -e = L \frac{di}{dt}$$

Readers who have studied higher mathematics may recognize the fraction as a derivative. In the first equation, the fraction represents the change in the intensity of a magnetic field divided by the time it took the change to occur. N is the number of turns of wire in the coil. In the second equation, the fraction represents the change in current through the inductor divided by the time it took the change to occur. L is the inductance of the coil in Henries. The minus sign in front of the e on the left side of each equation indicates that the induced voltage (the transient) has a polarity opposite that of the applied voltage. How do these factors affect the transient? Larger inductors are capable of producing larger transients. And, more

rapid changes in current flow or magnetic field intensity produce larger transients.

Now back to figure 1. The battery is a 1.5 volt flashlight battery. The pushbutton starts and stops the flow of current through the coil. The neon light bulb demonstrates that the transient voltage produced by the magnetic field decaying around the inductor can be considerably greater than the applied voltage. (An NE-2 bulb requires around 90 volts to make the gas inside the glass envelope glow. - ed.)

When constructing this demonstration circuit, use a large iron core inductor. An old filter choke from a power supply will do nicely. If you don't have one in your junkbox, try using the primary winding of a filament transformer. If you don't have a filament transformer in your junkbox, just wrap several hundred turns of wire around a bolt, a large nail, or a steel rod to make an impromptu electromagnet.

What happens when you press the pushbutton? Current from the flashlight battery flows through the inductor. At this time, the neon light bulb won't light. Now, release the pushbutton. Current flow through the inductor stops. The magnetic field around the inductor collapses (decays) very rapidly and the transient produced has more than enough voltage to make the neon light flash once. The energy stored in the magnetic field was converted to electrical energy when the field decayed around the inductor.

Next time: How to suppress field decay transients.

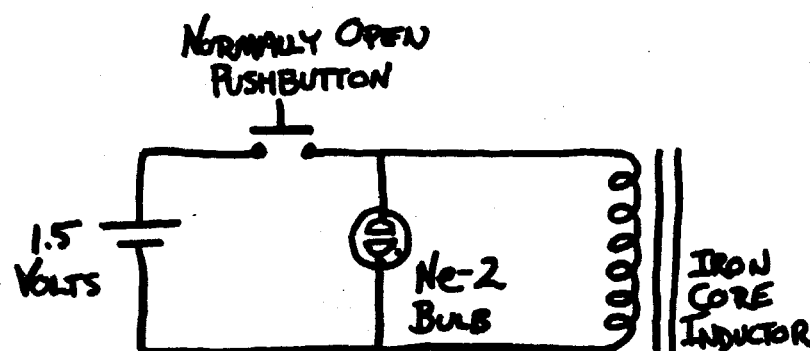
73, and don't shock yourself with a transient.

John, WB9TQG

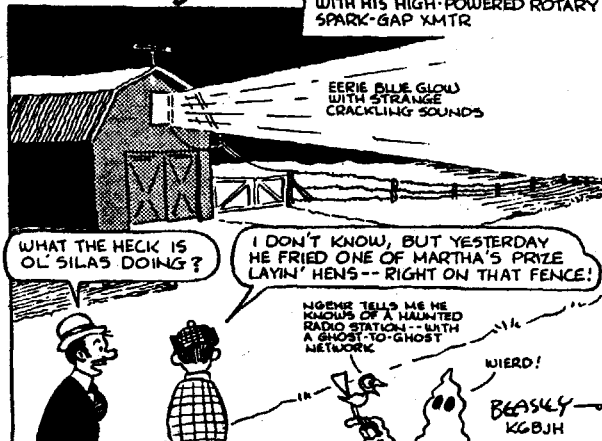
FIELD DECAY TRANSIENT

DEMONSTRATION CIRCUIT

Figure 1



Yesteryears



Thanks Worldradio

MILWAUKEE VOLUNTEER CORE GROUP ENDS OPERATION

The Milwaukee Volunteer Core Group (DeVry VEC) will give its last Amateur Radio examinations on Saturday, June 27, 1987, at WCTI. It is with deep regret that we will not be doing any testing. We do want to thank all of you who have come from all over the state to be tested with our group. I am sure that the other groups in the state will be able to assist you all. Thanks again for your support.

Syl Janczak, WD9JKZ
Core Group Leader

Wisconsin Nets Association Ltd.

WISCONSIN NETS

NET	WNA	FREQ	UTC	CDT	MANAGER
BWN	YES	3984	1100Z	0600	WD9IID
BEN	YES	3985	1700Z	1200	KA9RII
WSBN	YES	3985	2230Z	1730	WB9ESM
WNN	YES	3723	2300Z	1800	N9DGL
WSSN	YES	3645	2330Z	1830	N9BDL
WIN-E	YES	3662	0000Z	1900	WB9ICH
WIN-L	YES	3662	0300Z	2200	KC9CJ
NWTN	YES	34/94	2330Z	1830	W9ZZM
WCWTN	YES	31/91	2330Z	1830	NK9L
GR.BAY	NO	72/12	0145Z	2045	WB9NRK
			THU.	WED.	
RACES	NO	3993.5	1715Z	1215	WC9AAG
			USB TUE. & THUR.		
RACES	NO	3993.5	1300Z	0800	WA9OAY
			LSB SUN.		

Section Manager's notes

April, 1987

Richard R. Regent, K9GDF
5003 South 26th Street
Milwaukee WI 53221

Congratulations to new Assistant Technical Director N9TD.

Special thanks to WNY SM W2MTA and his XYL for visiting Wisconsin.

July 1st is the start of my fourth year as Section Manager, thanks for all of your help and support.

Happy Fourth of July to all.

July 10th, Four Lakes ARC will celebrate 50 years' affiliation with ARRL.

July 11th, Eau Claire ARC Hamfest, 8 a.m. at 4H barns on Fairfax Street behind Highland Mall, walk-in tests, look for me at the ARRL booth.

Don't forget the Milwaukee Circus Parade this year.

The Riponfest is usually held in July and may have Amateur Radio activities.

July 18th, South Milwaukee ARC Swapfest, 7 a.m. at American Legion Post, Shepard Avenue north of Ryan Road, Oak Creek, walk-in license exams and WAPR packet meeting.

W9YCV helping to coordinate packet radio and formal traffic handling.

As a reminder, your Field Day entry must be postmarked July 30th.

August 1st and 2nd the Fox Cities ARC will have a special event station operating from the EAA Fly-In with W9TA and NB9J promoting amateur activities.

Sorry to report Silent Key W9DIG.

Please get your event dates to me three months in advance to meet publication deadlines.

Have a safe summer.

9RN CYCLE 4 REPORT APRIL 1987 QNI 359 QTC 570 QTR 901 IN 60 SESSIONS WISCONSIN PARTICIPATION NINETY FIVE PERCENT STATIONS W9CBE KC9CJ W9CXY W9DND K9GDF K9UTQ AND W9YCV 73 - W9JUI 9RN MANAGER.

CAND REPORT FOR APRIL 1987 X 663 MESSAGES IN 30 SESSIONS X 9RN REPRESENTED 100 PERCENT X WISCONSIN STATIONS W9IEM KA9RII W9ODV KC9CJ AND W9CBE X 73 - JERRY W5KLV CAND MANAGER.

May 1987

Awards Manager KY9P presented 6-meter VHF/UHF Century Club Award to KA9SOW for confirming 100 grid squares.

Kettle Moraine Radio Amateurs lookin' good in their Club T-Shirts and Jackets.

W9IZG now on Packet Radio.

N9AW now on Packet, worked VU2 on RTTY, and helps local Novices with TVI cures.

ATC NK90 continues helpful technical assistance.

Watch for the new 700-page ARRL Operating Manual, especially Chapter 14 Emergency Communications, which I wrote. Every Club should have a copy of this Manual in their library.

KA9CPA is now N9GJI.

Congratulations again to Wisconsin Oldtimer W9DR of Milwaukee, who first began experimenting with Amateur Radio in 1909.

August 15th, Green Bay Mike and Key Club Swapfest, Community Center on Dousman Street, open 7 a.m.

Also August 15th, Rhinelander Swapfest, sponsored by the Northwoods ARC, South Park School, 511 South Pelham Street, open at 8 a.m.

August 22nd, exams at Nicolet College, Science Center Fireside Room, contact K9RMN.

Affiliated Club Coordinator, KA9FOZ, can send you information about Special Service Club programs or ARRL Affiliated Club benefits. Working with the news media? Ask Public Information Officer K9ZZ for promotional literature about Amateur Radio or requirements to become a Public Information Assistant. Interested in tracking RFI/TVI, being an Official Observer or an Auxiliary Monitoring station? Then check with Official Observer Coordinator NC9G.

CAND REPORT MAY 1987 X 618 MESSAGES 31 SESSIONS 9TH REGION REPRESENTED 100 PERCENT WISCONSIN STATIONS N9BGE W9CBE KC9CJ W9ODV KA9RII W9IEM - GARY W5KLV CAND MANAGER.

TRAFFIC TOPIX

GENE SANTOSKI K9UTQ
1220 18th Street So.
Wisconsin Rapids, WI 54494

I hope all who read this are having an enjoyable and safe summer. It always seems to go by so fast. And, of course, the traffic nets suffer because people are on the go and the weather is too nice to be sitting in front of a radio. Seems like just after school starts, net activity is on the increase.

During the summer months, the "pressure" is off as far as high volume traffic that we usually experience during the Holiday Season in Winter. Lets face it, hardly anyone sends a Memorial Day, July 4th, or Labor Day greeting!! That's not to say it can't be done - it just isn't. The resultant slack in net activity is a good time to sit back in your lawn chair with an 807 or Mint Julep close by and reflect on your traffic handling techniques and activities. Are they what they should be? Are there little technicalities about net operating and traffic handling that you are just not familiar with or sure of?

You can probably find answers to you questions by reading various ARRL publications (Operating Manual, Handbook etc), asking others on the nets, or by contacting your STM or SM for the answer. They are all ready, willing and able to help you. You will never find out if you don't ask.

There is a meeting of the Wisconsin Nets Association scheduled in conjunction with the Stevens Point Swapfest on June 21st. All net managers and delegates should make an effort to attend, as many important issues need to be discussed and decided upon. Among the issues are Packet on NTS, the future of Wisconsin Intra-state/Late net, and the lack of activity and help on the Ninth Region nets. We in the WNA need the input and ideas of all concerned. All are welcome to sit in on the meeting but only delegates and league officials have voting power. Please keep in mind that we are open to ideas from the general net participants.

If a decision is made at the meeting to try to keep WIN/L going, we will be in need of a Net Manager to replace Dick, KC9CJ who presently has his hands full with other activities and would like to be relieved of his duties as NM of WIN/L. If you are interested in that position please let me know as soon as possible. However, at the present time, the future of that particular Section Net does not look very bright because there simply is not enough activity on that late session of WIN to warrant keeping it alive.

It has been said that packet will be the traffic handlers' mode of the future, but it's beginning to look like the future now. Packet networks are springing up all over providing outlets mainly on VHF, but HF packet is also beginning to make its appearance.

Offering error-free communication at high speed, 300 wpm and up, plus automatic operation, packet obviously outperforms other modes of traffic handling, voice and CW. It's not only faster and more accurate, it offers the possibility of being available 24 hours a day.

But, it has its growing pains. It has been necessary to develop standards to insure that amateur stations everywhere will be able to intercommunicate. The FCC has had to draft new regulations, which fortunately have been generous and into the future, giving us the opportunity to develop our systems in a direction that will greatly enhance our ability to provide the public service envisioned by FCC regulations.

The HF systems, in particular, have had their problems with marginal conditions and crowded bands making it difficult to obtain error-free copy from a bulletin board, or preventing others from accessing it. Message have gone astray when an operator has accidentally removed them from a bulletin board or misdirected them.

In the recent Night Tango exercises, which tested the various emergency communication services such as Amateur Radio, MARS, Civil Air Patrol, the National Traffic System outdid packet systems. But that's changing as packet systems develop and bugs are worked out.

Packet's strength - error-free transmission - could be its weakness. Error-free hardware and error-free software do not produce error-free operators. One can rely too much on the error-detecting features of the system and forget that any computer system operates on the GIGO principle: garbage in, garbage out.

continued on page 15



THE WISCONSIN PACKETEER

Wisconsin Amateur Packet Radio Association (WAPR)
P.O. Box 436 Cedarburg, Wisconsin 53012-0436

ANTENNA WANTED

Does anyone have any 2 meter base antennas to get rid of? I need something, either vertical or yagi. Finally going to put up a real antenna for two meter packet!!

Dan, AI9D

PACKET POINTS

Q. Why in the world am I having so much difficulty in packeting data to another digi via a link or two in-between when the signals of all links are good to excellent.

A. Well it might be worth while to consider the following points and check a few parameters set on your TNC.

1) You may experience such problems if you're digipeating to and thru a TNC that has its protocol set to a different version than yours or hasn't upgraded its protocol to that in use by most TNCs in your area.

FOR EXAMPLE: Some implementations of AX.25 protocol won't properly digipeat Version 2.0 AX.25 packets, so, digipeating packets may not be successful or at best troublesome if you are digipeating thru TNCs with an earlier version protocol other than AX.25L2V2.

2) Check your transmit delay parameter to make sure that it conforms to the rig you're using for packet allowing enough time for transmitter lockup before sending data.

The transmit delay value tells the TNC how long to wait after keying up the transmitter before sending data. Some startup time is required by all transmitters to put a signal on the air; some need more, some need less. In general, crystal controlled rigs with diode antenna switching don't need much time, synthesized rigs need time for PLL lockup, and rigs with mechanical I/R relays will need time for physical relay movement. The correct value for your rig should be determined by experimentation, make sure it is set correctly. The proper value of this setting may also be affected by the requirements of the station you are communicating with.

Note that the TAPR TNC 1 and other TNCs using the same firmware interpret in 40 ms intervals. The value of TXDELAY on TNC 2's will be 4 times the value used by a TNC 1 user to give the same delay time.

B. Protocol upgrades are coming into use at a pretty fast rate. Health counters are being added, protocol bugs are being found and corrected, and new commands are being added. This may also cause problems with digipeating packets thru systems with yet another version protocol in place.

So, in the mean time until we all have the same protocol (standardized) in place, and TXDELAYS are set properly on all systems, we are going to have some serious problems with reliable links, especially if we're looking to the future

of emergency communications. Make the most of what you have to work with and by all means learn what tasks the parameters of your TNC perform and set them correctly to minimize troublesome packeting.

Bob - N9BKJ

NET/ROMS IN OPERATION

The WA9FIO-1 digipeater in La Crosse has been converted to a NET/ROM packet network node. Although it can still function as a conventional digipeater, using the features of NET/ROM has several advantages over conventional digipeating, and requires no modification to a users own TNC.

Communication via NET/ROM nodes has the advantage that each node stores a packet, acknowledges the sender, and then sends it to the next node or to the final TNC. If a packet is lost due to noise or collision, the packet is retried only over the hop that lost the packet. The originating TNC does not need to resend the packet. This greatly increases throughput and reliability.

Since NET/ROM nodes use a special protocol to communicate with other NET/ROM nodes, links can be established using far more than the usual seven digipeater limit. Also, several NET/ROM nodes can be co-located, with each on a different frequency. This allows, for example, redirecting long distance traffic on 450 MHz "network backbones" where directional antennas, and higher baud rates can be used on less crowded frequencies.

There are currently four NET/ROM nodes in operation in Minnesota, WOMXW-1 in Rochester, WAONLP-1 in Hampton, and WOTN-1 & WOTN-2 in Minnetonka. KCOOX-1 and KOVM-1 in are now operational NET/ROM nodes, enhancing traffic thru Cedar Rapids, Iowa.

BBS PACKET CONTEST!

Yes, that is right, WABERQ BBS is sponsoring a packet contest starting June 1, 1987 at 0000UTC thru June 30, 2400 UTC.

Rules are simple - You must connect to WABERQ BBS on 3640 (80 mts) and then send a message to WABERQ stating:

Time, Date, Signal Strength,
Then your call and name formatted like so:

WABERQRICHARD SHANKLIN301
S BROADWAYBLANCHESTER OHIO 45107

Then send a stamped self address envelope to me and I will send you an 8 1/2 by 11 certificate.

Why am I doing this? Simple I'm trying to start packet on 80 mts and this will also give me a good idea of dependable paths. See you on 80!!!!

Dick - WABERQ

NOW FORWARDING TO ASIA.

As most of you know, my other port is on 14.107 MHz. We have now established a link to California, New Mexico, Arizona, Prince Edward Island, and now we have Hawaii, Australia, & Japan on-line. I will be receiving bulletins, etc., from these stations and will be able to autoforward to them. I will be putting the calls in another bulletin with all the PBBS's on line and you will be able to enter your message from most all PBBS's in the area & it will be autoforwarded, hopefully! Is there any interest in this?

Dan - WB9TYT

PRIORITY TRAFFIC FLAGGING

Jack, AE9H pulled this off of the W7LHO PBBS and gave to me. We might consider implementing this in our area. If nothing else, some thoughts on the subject might be worthwhile.

Dan - WB9TYT

PLEASE NOTE: all BBSs particularly in Asianet / VK / ZL and others who use forward files are requested to use "\$T" as the first item in their forward files prior to designating any other station or call, etc. This will insure that the first message out to anyone will be any very urgent or Emergency message. As we have at present, this way, if only one message gets thru it will be the urgent one...also if there is a back log of messages, this "\$T" will get ahead of any Routine message.

Stations are requested to take whatever action required to process the Priority traffic as soon as possible..

All stations are again requested to use "\$T" only for urgent or Priority traffic.

ARRL EXECUTIVE COMMITTEE, MAY 16 - PACKET

Executive Vice President Dave Sumner, K1ZZ, reviewed progress toward finalization of a draft Request for Special Temporary Authority (STA) for about 40 stations to participate in a controlled study of HF packet networks. Under the STA, these stations would be permitted to operate HF packet nodes under automatic control (automatic packet operation is allowed above 50 MHz but not on the HF or MF bands). The study will be limited to six months.

The ARRL Letter

HF PACKET NO-NO

I continue to see U.S. packet stations attempting to connect to DX stations thru digipeaters. Unless ALL stations in the path being used have THIRD PARTY AGREEMENTS with each other, it is an ILLEGAL operation!!! This means that the digipeater station(s) must have THIRD PARTY AGREEMENTS with the originating, destination and any other digipeater stations in the path!!! When in doubt - DON'T!!!

Steve - WB9ZRE

TRAFFIC TOPICS (continued from page 13)

The automatic routing provisions of "digi-peaters" work fine as long as the correct routing instructions are on file; otherwise the messages can stand around awhile until a human operator can supply what is needed and send them on their way.

The ARRL Board of Directors and the NTS area staffs are studying the problem, and may come up with some modifications to the ARRL message format to make interfacing with packet systems simpler, and they are also making organizational changes in the NTS to take full advantage of what packet has to offer. Expect to see the results within a few months.

There are presently a couple dozen active traffic handlers currently on the new mode with others adding to the list at a fairly regular pace. I myself should be up and running on Packet by the end of June. Like it or not, I strongly feel that the future of the National Traffic System will rely heavily on Packet Radio. If any of you have not already notified me that you are currently active on Packet, please send me a radiogram to I can add you to the growing list of Traffic Packeteers.

The new novice enhancement that became effective in mid-March should help to increase the number of hams (especially newcomers) that become active in traffic handling particularly on local 220 MHz nets. Hopefully, a great majority of those people will carry their traffic interests to 2 meters and HF when they upgrade to privileges on those bands. One of the best ways to get in contact with new hams is at club meetings and at licensing classes. We have to make new and prospective hams aware of this facet of Amateur radio and stress to them that it is our public service record that keeps us alive and well in the FCC's eyes. I feel it is IMPERATIVE that ALL amateurs be involved in public service work in some way.

One more thing, just to clear the air about a recent controversy regarding counting of traffic on a net. If a station checks into a net with X number of pieces of thru traffic and no one offers to take it, that station can offer to take it to a REGION net but IT CANNOT BE COUNTED as handled on that particular net because it was not sent over the air on that net. I realize that this tactic is being used at Region level but it is against standard procedure as set forth by ARRL in its Public Service Communications Manual - Page 31 where it states: "The basic count for traffic handled in nets is one point for each time a message in standard ARRL form is TRANSMITTED & RECEIVED during a net session, at the direction of NCS." There is a possibility that this policy may be changed by the League, but until then, the above guideline will be followed to the letter on ALL Wisconsin nets!

That does it for now - enjoy the summer and get new people into nets.

73, Gene Santoski K9UTQ

NEW NET DIRECTORY AVAILABLE

The 1987 Net Directory is now available from HQ (ARRL, 225 Main St., Newington CT 06111) for \$1.00 postpaid. The new Directory contains current listings of all National Traffic System nets, and many other local, regional, national and international net operations.

Special interest and Novice nets are also included. Appendices include many QST articles on traffic handling and other resources such as a third party traffic countries list. The 1987 Directory features a gold color cover. (From The ARRL Letter).

VIEWS FROM A HILLTOP

TOM II

Some concern was expressed a few months ago when a house was offered for sale on a local packet PBBS. So, this month we will address the subject of "commercial" messages on amateur radio digital and voice circuits. A few years ago the big flap was about amateur radio operators supplying a communication service for the Lions Eye Bank organization.

Presently, we can not communicate to the ARRL the need for 610's or training material via any amateur frequency or mode. These operations are prohibited because amateur radio can not be used to facilitate the regular operation of any business or corporation, even if they are "non-profit" or charitable (part 97.114(c)). Now, as I see it, this may have some bearing on the communications we provide for the City of Festivals Parade Inc., the Great Circus Parade Inc., the Milwaukee County American Red Cross Chapter Inc., the Circus World Museum Inc., and the various police agencies of the City of Milwaukee Inc., and Milwaukee County Inc.. Gee, I hope the the FCC doesn't get wind of our activities in Milwaukee. Also, I suggest any incorporated club using amateur frequencies to facilitate their operations by announcing meeting dates or other activities should "cease and desist" or be prepared to defend their actions in Federal Court. Part 97.114(b) prohibits....traffic involving material compensation, either tangible or intangible, direct or indirect, to a third party, a station licensee, a control operator, or any other person.

In the past, before repeaters, it was considered OK to mention the availability of your surplus equipment as long as you didn't mention "brand names". From time to time other wrinkles would develop, you could exchange names over the air but phone numbers were a no-no, later it flipped the other way and you gave a phone number for more information. Presently, the rule is you can talk about anything except asking price. Now, if current interpretation allows you to sell your Kenwood 520 and discuss accessories included like microphone, keyer, and antennas, I fail to see the difference if one of the accessories is a suitable QTH for the rig.

A modified Golden Rule to apply to this situation may be: If it helps someone and does no actual harm (as opposed to perceived harm) to anyone, let it be! If you have any concerns, questions, or suggestions for this column, please send them to TOM II at the WAPR address or post them on the WA9KEC PBBS (send TOMII)

Radio club members, the best way to rid yourself of your duties is to discharge them.

FREE WANT ADS in BADGER STATE SMOKE SIGNALS

Yes, they are FREE. BSSS will run your WANT AD listing Amateur Radio related equipment you wish to buy, sell, trade, or whatever. Non-commercial listings only. Length and number of free ads may be subject to space limitations. We reserve the right to refuse any listing that we feel is inappropriate. Send to Kenneth A. Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901.

WANTED: Kenwood AT230 tuner or equal. Harry Westlund, K9EHJ, 720 Jefferson St., Baraboo, WI 53913.

FOR SALE: Heath Mohawk Receiver, \$50.00. Robot 400 SSTV converter, \$100.00. Ed Krogan, KEØOJ (ex-KA9RMD), Phone 319-425-4587.

FOR SALE: Mike: Electro Voice model 15, \$15.00; Transmitter: HT-37, \$80.00; Receiver: SX-111, \$50.00 Transceiver, HW-100, \$150.00. Robert Johnson, WB9EIW, N6646 Fawn Circle, Pardeeville. 53954. (608) 742-6460.

FOR SALE: Kenwood TS-180S, complete with power supply, speaker and Microphone. \$600.00. Lyle Lytle, W6599 C.T.H. P, Pardeeville, WI 53954. (608) 429-2656.

FOR SALE: 75 assorted stamps. \$1.00 - choose U.S./foreign. Richard R. Regent, K9GDF, 5003 South 26th St., Milwaukee, WI 53221.

WANTED: Sheets of the old five-cent Amateur Radio stamps issued in 1964. Gary Heilmann, WA9FRQ, 1171 Mather, Green Bay, WI 54303.

WANTED: Speaker cabinet for a Hammarlund HQ-129 or HQ-140. Mark Kopp, 5562 Hwy. 113-19, Waunakee, WI 53597. (608) 849-7578

WANTED: FC-102 antenna tuner. Joe Jarecki, KA9VKH. (715) 836-7854

WANTED: Phonograph records from 1950's, 60's & 70's, in good playable condition. AC9J, LaVonne. (608)-273-3217

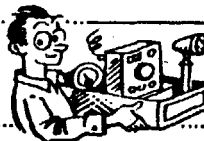
WANTED: YAESU FT-101, 101E or 101EE with digital frequency readout meter. Rick Plouffe, Rte. 3, Box 33, lot 2. Baraboo, WI 53901.

FOR SALE: Lakeshore Industries P-400-GG linear, 80-10, and 11, 400 Watts out, 4-EL38s, clean. \$250.00. Palomar Engineers all-band pre-amp, 1.8-54 MHz., manual, clean. \$90.00. G. Loudon, N9CCI, 205 E. Main St., Omro, WI 54963. (414) 685-6172.

SMUG, Sinclair Milwaukee Users Group. Get full use of your ZX, TS1000 or TS2068. Write to SMUG, P.O. Box 101, Butler WI 53007.

When we are flat on our back, we can always look up and check the antenna.

"Do you have
Something to sell?"



OUR WANT ADS GET RESULTS !"

Unusual Trivia Quiz



By Gene Santoski, K9UTQ
1220 18th Avenue South
Wisconsin Rapids WI 54494

QUIZ NO. 6 IN A SERIES

1. What do the letters CTCSS represent?
2. What is the formula for the resonant frequency of a circuit?
3. Where is the antique wireless association museum located?
4. What company manufactured the NC-300 receiver?
5. What 20 meter frequency are W1AW RTTY Bulletins sent on?
6. We have a third party traffic agreement with Liberia - true or false?
7. A spoke shaped ground of a vertical antenna system is called what?
8. What chapter of QCWA is Wisconsin?

9. Who is the Section Emergency Coordinator for Wisconsin?
10. What is the call letter prefix of Sri Lanka?

Please submit your answers to K9UTQ; address above. No answers have been submitted for two months! If ya wanna win the prize, ya gotta try!! The answers to the June quiz are on page 7.

Please share your Field Day photos with Badger State Smoke Signals readers! Send a few of your best to Jim Romelfanger, K9ZZ, Editor, 412 1/2 Ash Street, Baraboo WI 53913.



THE ORIGINAL MIDWINTER SWAPFEST

WAUKESHA EXPOSITION CENTER
HIGHWAYS F & FT
WAUKESHA, WISCONSIN
SWAPFEST
P.O. Box 1072
MILLWAUKEE, WISCONSIN 53201

HAM IT UP EVERY SPRING MADISON SWAPFEST

April 10, 1988

DANE COUNTY EXPO CENTER
FORUM BUILDING

Sponsored By MARA WB9AER
Box 3403 - Madison, Wis. 53704

SOUTH MILWAUKEE AMATEUR RADIO CLUB SWAPFEST

July 18, 1987

(Held every July)

American Legion Park
Shepard Ave. Oak Creek, WI

South Milwaukee ARC
P. O. Box 102
South Milwaukee, WI 53172

AMATEUR ELECTRONIC SUPPLY®

4828 W. Fond du Lac Avenue
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